

da Vinci's Ratio

You need ☒ a measuring tape

☒ a calculator

☒ a computer

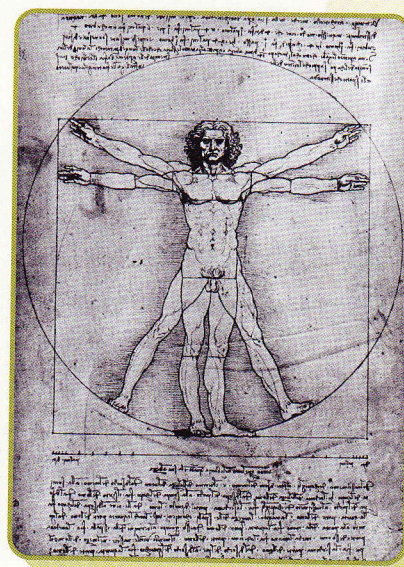
Leonardo da Vinci concluded that a person's height is about equal to their arm span, measured fingertip to fingertip.

Investigation One

1. Investigate the truth of da Vinci's conclusion:

- Copy the table into your book.
- Measure the arm span and height of at least 10 people. (You don't need to write their names.)
- For each person, calculate $\text{arm span} \div \text{height}$.

Person	Arm span (cm)	Height (cm)	Arm span \div height (as a decimal)
One			
Two			
Three			



- 2.
- What would a "1" in the last column of your table mean? What does it mean when the number in this column is less than (or greater than) 1?
 - Do the ratios in the last column support or contradict da Vinci's conclusion? Explain.
 - What might da Vinci say to explain the ratios that are above or below 1?
 - Enter the arm spans and heights of your 10 (or more) people into a spreadsheet and create a scatter plot graph. Describe what you see.

Investigation Two

1. Carry out a similar investigation to discover what relationship there is between a person's height and the circumference of their head.
2. Using your findings, what might be the head circumference of these three people:
- Sue, who is 156 centimetres tall?
 - Katherine, who is 183 centimetres tall?
 - Leah, who is 166 centimetres tall?

